CORE Metadata, citation and similar papers at core.ac.uk

International
Journal of Human Sciences
ISSN:2458-9489

Volume 15 Issue 1 Year: 2018

Stress and ways of coping among first year nursing students: A Turkish perspective[1]

Hicran Bektaş[2]
NurtenTerkes[3]
Zeynep Özer[4]

Abstract

Aim: The aim of this descriptive study was to assess stress and ways of coping among first year nursing students.

Methods: The sample consisted of 90 nursing students from baccalaureate degree programs at a university in Turkey. The research tool consisted of demographic questions, the Pagana Clinical StressQuestionnaire (CSQ) and the Ways of Coping Questionnaire (WCQ). The data collection form was performed at the end of the first clinical practice day and the re-test was performed at the end of the last clinical practice day.

Results: The average age of the population was 19.72±1.32, 78.9% of the students were female. In the research, average point of the students' CSQ and WCQ were calculated as 50.50±9.36 and 71.06±13.64 before the clinical practice, 52.07±9.87 and 77.63±17.03 after the clinical practice respectivelyand it was found that nursing students had significantly higher stress in their clinical practices.

Conclusions: Nursing students experience varying degrees of stress across clinical practices and they consistently report that their clinical experiences are stressful.

Keywords: Nursing education; nursing students; undergraduate; emotional stress; coping skills.

Introduction

Nursing education which includes both theoretical knowledge and clinical training skills aims to prepare nursing students to develop knowledge and skills for professional nursing roles (Hamaideh & Ammouri, 2011-174). In Turkey, after the basic 12-year education, students get a bachelor's degree with four years of nursing education. The nursing education programme includes 4600 hours of theoretical and clinical education. The duration of theoretical education should be at least one-third of the total education period, while the duration of clinical education should be half of the total education period (The Council of Higher Education, 2008).

Clinical training is a vital part of curriculum and plays a crucial role in shaping the basic skills and professional capabilities among students (Barimnejad et al., 2004-64). Through their clinical activities, students learn how to practice nursing and develop the knowledge, skills, and values essential for professional practice (Oermann & Lukomski, 2001-70). However, nursing

[1]Information or explanation about the article, if any is there (submitted in a symposium, etc., conference organization, title, location, and dates).

[2] Prof. Dr., Akdeniz University, Faculty of Nursing, Medical Nursing Department, hbaydin@akdeniz.edu.tr
[3] Research Assist., Akdeniz University, Faculty of Nursing, Medical Nursing Department, nurtenterkes@gmail.com
[4] Prof. Dr., Akdeniz University, Faculty of Nursing, Medical Nursing Department, zeynepardaozer@yahoo.com

Submitted: 2017-05-03 Published: 2018-03-06

Bektas, H., Terkes, N., & Özer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

students have only taken a few basic medicine and nursing courses prior to actual clinical practice. In other words, these students lack sufficient knowledge and skills to perform their duties and provide adequate care of patients (Sheu et al., 2002-166). Therefore, nursing students generally suffer from high degrees of stress during clinical practice; this has been clearly documented over decades (Watson et al., 2008-1534; Suresh et al., 2012-773; Hamaideh et al., 2017-197). Stress is a complex event that happens in the interaction between individuals and their inner and outer environments; such reciprocal interaction can cause physical, mental, emotional, and behavioral changes (Chipas et al, 2012-49). Researchers have reported the common causes of stress in nursing students to include the fear of making a mistake in the clinical environment, excessive clinical responsibilities, a lack of free time, a fear of academic failure, a sense of responsibility for what happens to the patients (Nelwati, McKenna, & Plummer, 2013-59; Liu et al., 2015) nursing stuff's incivility and communication with the educators, patients and employees (Nelwati, McKenna, & Plummer, 2013-60; Sun et al., 2016). Students often attempt to control and reduce their stress levels through strategies, such as avoidance and religious and social support (Yamashita et al., 2012-492).

Excessive stress also can be harmful to a student's academic performance and students who perceive their stress levels as very high may often become depressed (Seyedfatemi et al., 2007-9). The few investigations of nursing students that focused specifically on depression indicated high prevalence of depressive state (often ~50%) when mild depression is counted (Chandavarkar et al., 2007-105; Christensson et al., 2011-299). This information may aid in designing appropriate intervention strategies and planning modifications in the nursing curricula to enhance the students' learning abilities (Yamashita et al., 2012-491). If stress is not deal with effectively, feelings of loneliness and nervousness, as well as sleeplessness and excessive worrying, may result (Seyedfatemi et al., 2007-8).

Coping strategies available to students in the clinical area can manage their stress levels. Useful coping strategies assist students in achieving improved marks that reduce their stress (Al-Zayyat and Al-Gamal, 2014-332). The most commonly used strategy to deal with and cope with stress was the problem-solving approach, an approach considered the most appropriate way of dealing with stress (Labrague et al, 2017-479). When effective coping strategies are used, emotions can be adjusted and the stressful situation can be resolved. In other words, the use of effective coping strategies facilitates the return to a balanced state, which reduces the negative effects of stress. Therefore, coping behaviors play a vital part in the process of stress adjustment (Sheu et al., 2002-171; Seyedfatemi et al., 2007-8). The aim of this descriptive study was to assess stress and ways of coping among first year nursing students.

Method

Ninety first class nursing students from Akdeniz University Antalya School of Health voluntarily participated in the study during the spring semester of 2010-2011 academic year. The Pagana Clinical Stress Questionnaire (CSQ) and Ways of Coping Questionnaire (WCQ) were used to assess stress levels and coping styles. The data collection form was performed at the end of the first clinical practice day and the re-test was performed at the end of the last clinical practice day.

Data Colletion Tools

On the study, Demographic Information Form, The Pagana Clinical Stress Questionnaire (CSQ) and Ways of Coping Questionnaire (WCQ) were used to assess stress levels and coping styles.

Demographic Information Form

The Demographic Information Formwasdesigned to describe demographic variables including age, gender, some open-ended questions about the causes of stress and coping with stressful situations at the clinics.

Pagana Clinical Stress Questionnaire

The Pagana CSQ, developed by Pagana (1989-173) consisted of open-ended questions and a Likert-type scale for the purpose of determining the beginning stress value that is threatening or

Bektas, H., Terkes, N., & Özer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

challenging to nursing students in their first clinical experience. The items of the questionnaire are divided into four categories, based on the effect each has on emotions: threat, challenge, harm, and benefit. The responses are assessed on a five-point Likert scale that ranged from 0 (not at all), 1 (a little), 2 (moderately), 3 (quite a bit), and 4 (a great deal). Every item is calculated as scored so the total score can be as low as "0" or as high as "80". A low score signifies a low level of stress, and a high score denotes a high level of stress. In the validity-reliability study for Pagana CSQ, the internal consistency for the challenge and threat scales, which is the focus of this instrument, was found to be, respectively, 0.85 and 0.84 (Pagana, 1989-173). The Turkish translation of CSQ and adaptation study was performed by Sendir and Acaroglu (2008-740). They found that the Cronbach's alpha coefficients ranged between 0.66 and 0.72 in the test of the CSQ's internal consistency, and the total value was 0.70 (Sendir & Acaroglu, 2008-741).

Ways of Coping Questionnaire

The WCQ is a 4 point Likert-type scale, originally developed by Lazarus and Folkman (1984-138). The WCQ was adapted for the Turkish culture and shortened to 30 items. The factor analyses revealed 5 factors, namely, "Optimistic approach" (α =.68), "Self-confident approach" (α =.80), "Helpless approach" (α= .73), "Submissive approach" (α= .70), and "Receiving social support" (α= .47) (Sahin & Durak, 1995-70).

Data analysis

Data was statistically analyzed using the SPSS statistical package version 23.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics, one-way ANOVA, t-test, Cronbach's alpha coefficient, and correlations were used for the analyses. In all analyses, the usual significance level was 0.05.

Ethical considerations

Permission to conduct the study was obtained from the Director of the School. It obtained the ethics committee approval from the Akdeniz University Faculty of Medicine Non-entrepreneurial Clinical Research Ethics Committee (Approval No: 21.12.2010-216.1). The informed consent was obtained from the nursing students. Participants were assured of their right of refusal to participate in or to withdraw from the study at any stage without any negative consequences. The questionnaire was completely anonymous. The data were kept confidential.

Results

Demographic data

This study included 90 nursing students, of which 78.9% were female and the students' mean age were 19.72±1.32 years. The majority of the students indicated that the nursing was their first to fifth choice (58.9%), they chosed the nursing job willingly (63.3%) and their first clinical experiences were at the Internal Medicine (53.3%) (Table 1).

Table 1. Socio-Demographic Characteristics of the Students (n=90)

Variables	**Mean ± SD**	**Range**
Age (year)	19.72±1.32	18-23
	N	**%**
Gender		
Female	71	78.9
Male	19	21.1
Nursing ranking in the occupational choices		
1-5	53	58.9
6-10	17	18.9
10 >	20	22.2
School preference		
Willingly	57	63.3
Unwillingly	21	23.4
Incidentally	12	13.3

Bektas, H., Terkes, N., & Özer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

The first application unit		
Internal Medicine	48	53.3
Surgical	42	46.7

The most commonly stressful situations encountered by the nursing students before and after the clinical practice, were encounter new situation and environment (before 84.4%, after 77.8%), worry about not making right applications (before 74.4%, after 67.8%), don't feel adequate (before 62.2%, after 58.9%), and not know how to use the forms used in clinical setting (before 56.7%, after 45.6%) (Table 2).

Table 2. Stressful Situations of the Nursing Students at the Clinical Settings (n=90)

Variables	**Before the clinical practice**		**After the clinical practice**	
	N	**%**	**N**	**%**
Encounter new situation and environment	**76**	**84.4**	**70**	**77.8**
Worry about not making right applications	**67**	**74.4**	**61**	**67.8**
Don't feel adequate	**56**	**62.2**	**53**	**58.9**
Not knowing how touse the forms used in clinical settings	**51**	**56.7**	**41**	**45.6**
Worry about to meet the physical needs of the patients	47	52.2	31	52.2
Differences between education and clinical practice	41	45.6	43	47.8
The idea of not being able to help patients	41	45.6	36	40.0
Worry about to meet the emotional needs of the patients	40	44.4	30	33.3
Making mistakes due to more responsibilities	40	44.4	36	40.0
Worry about not finishing their assignments on time	36	40.0	34	37.8
The death of patient	35	38.9	25	27.8
Lack of communication with the patient	34	37.8	28	34.4
Not know what to ask to the hospital staff	33	36.7	29	32.2

Stress and Ways of Coping

The Pagana CSQ consisted of two parts: part one included one question to assess the stress level among the nursing students, and part two included items that allowed for categorization emotions the clinical experience such as harm/loss, threat, challenge, or benefit. Cronbach's alpha coefficient of the CSQ have been calculated as 0.71 before the clinical practice, and 0.77 after the clinical practice (Table 3).

Table 3. Mean, Standard Deviation (SD) and Cronbach's Alpha of the Pagana Clinical Stress Questionnaire (CSQ)

CSQ Questionnaire	**Before the clinical practice Mean±SD**	**After the clinical practice Mean±SD**	**t/p**
Challenge	25.40±6.70	25.19±6.72	t=0.249 p=0.819
Threat	14.39±4.45	14.77±4.92	t=-0.502 p=0.617
Harm/loss	6.34±2.45	7.93±3.22	**t=-3.960 p=0.000**
Benefit	4.37±1.99	4.18±1.68	t=0.639 p=0.524
Total	50.50±9.36	52.07±9.87	t=-1.167 p=0.246
Cronbach's alfa (α)	0.71	0.77	

Bektas, H., Terkes, N., & Özer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

Cronbach's alpha coefficient of the WCQ have been calculated as 0.80 and 0.88 before and after the clinical practice respectively (Table 4).

Table 4. Mean, Standard Deviation (SD) and Cronbach's Alpha of the Ways of Coping Questionnaire (WCQ)

WCQ Questionnaire	Beforetheclinicalpractice Mean±SD	Aftertheclinicalpractice Mean±SD	t/p
Self-confident approach	18.52±4.10	19.00±4.46	t=-0.825 p=0.412
Helpless approach	12.61±3.97	14.16±4.51	**t=-2.485 p=0.015**
Submissive approach	12.62±3.77	14.80±4.36	**t=-3.516 p=0.001**
Optimistic approach	14.37±3.31	14.89±3.49	t=-1.141 p=0.257
Receiving social support	9.40±2.43	9.86±2.88	t=-1.230 p=0.222
Total	71.06±13.64	77.63±17.03	**t=-3.072 p=0.003**
Cronbach's alfa (α)	0.80	0.88	

Considering the subscales of the CSQ before the clinical practice, the results showed that the challenge subscale (25.40±6.70), and the threat subscale (14.39±4.45), had the highest means among all perceived stress subscale scores. In contrast, the harm/loss subscale (6.34±2.45) and the benefit subscale (4.37±1.99) had the lowest means among all perceived stress subscale scores. After clinical practice similarly, the majority reported challenge (25.19±6.72), and threat (14.77±4.92), whereas the minority reported harm/loss (7.93±3.22), and benefit (4.18±1.68) subscales (Table 3). While the overall mean CSQ score before and after the clinical pratice were 50.50±9.36 and 52.07±9.87, there were no significant differences between the overall mean CSQ score,before and after the clinical pratice (t=-1.167; p=0.246). Only on the 'harm/loss' subscale of the CSQ, after the clinical pratice were found to have significantly higher scores than before the clinical pratice (t=-3.960; p=0.000) (Table 3).

The most common coping behavior of nursing students during their initial clinical experience was to self confident approach, followed by optimistic approach. In contrast, the least common coping style adopted by the nursing students was receiving social support. The average score of WCQ was 77.63±17.03 after the clinical pratice, which was significantly higher than the average score of 71.06±13.64 before the clinical pratice (t=-3.072; p=0.003).On the helpless approach (t=-2.485; p=0.015), and submissive approach (t=-3.516; p=0.001) subscales of the WCQ, after the clinical pratice were found to have significantly higher scores than before the clinical pratice (Table 4).

Bektas, H., Terkes, N., & Ozer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

Table 5. Pagana Clinical Stress Questionnaire (CSQ) Average Scores on Students' Socio-Demographic Characteristics (n=90)

	Before the clinical practice					After the clinical practice				
Variables	**Challenge**	**Threat**	**Harm/loss**	**Benefit**	**Total**	**Challenge**	**Threat**	**Harm/loss**	**Benefit**	**Total**
Gender										
Female	25.80±6.49	14.66±4.47	6.39±2.59	4.52±2.06	51.38±9.85	26.06±6.32	15.18±5.01	7.32±3.00	4.23±1.72	53.28±9.73
Male	23.89±7.41	13.37±4.34	6.16±1.89	3.79±1.65	47.21±6.46	21.95±7.33	13.21±4.35	8.37±3.98	4.00±1.52	47.53±9.31
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	**p<0.005**	p>0.005	p>0.005	p>0.005	**p<0.005**
Age										
<19	26.20±0.89	14.20±0.62	6.13±0.38	4.38±0.28	50.91±1.43	26.98±0.97	14.60±0.78	7.53±0.46	4.13±0.22	53.24±1.48
20	24.60±1.61	14.80±0.85	6.52±0.47	4.40±0.46	50.32±1.94	23.52±1.46	15.20±0.91	8.88±0.68	4.28±0.39	51.88±1.96
>21	24.60±1.45	14.30±1.19	6.60±0.54	4.30±0.40	49.80±1.97	23.25±1.23	14.60±1.06	7.65±0.68	4.15±0.38	49.65±2.19
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	**p<0.005**	p>0.005	p>0.005	p>0.005	p>0.005
Nursing ranking in the occupational choices										
1-5	25.68±6.82	14.34±4.80	6.32±2.63	4.40±2.23	50.74±10.53	24.87±6.74	15.09±4.98	8.25±3.49	4.25±1.75	52.45±10.05
6-10	25.76±7.40	14.53±5.03	6.53±2.67	4.41±1.66	51.24±8.62	24.06±7.80	14.88±5.85	8.29±2.64	4.35±1.69	51.59±12.25
>10	24.35±5.94	14.40±2.89	6.25±1.77	4.25±1.65	49.25±5.52	27.00±5.57	13.80±3.92	6.80±2.76	3.85±1.49	51.45±7.26
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005
School preference										
Willingly	26.05±6.74	13.61±4.24	5.82±2.04	4.05±1.95	49.54±8.60	25.00±6.66	14.56±4.69	8.07±3.42	4.33±1.68	51.96±9.95
Unwillingly	23.81±6.08	16.24±4.75	7.62±3.02	5.33±1.82	53.00±10.35	27.05±6.14	15.90±6.00	7.48±3.09	4.10±1.70	54.52±10.75
Incidentally	25.08±7.57	14.83±4.21	6.58±2.50	4.17±2.12	50.67±10.99	22.83±7.60	13.75±3.84	8.08±2.53	3.58±1.62	48.25±6.91
	p>0.005	p>0.005	**p<0.005**	**p<0.005**	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005
The first application unit										
Internal Medicine	23.94±6.43	14.56±4.54	6.58±2.341	4.54±2.19	49.63±8.90	25.42±7.35	13.96±4.98	7.96±3.55	3.94±1.74	51.27±10.64
Surgical	27.07±6.68	14.19±4.39	6.07±2.579	4.17±1.75	51.50±9.87	24.93±5.99	15.69±4.74	7.90±2.83	4.45±1.58	52.98±8.96
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005

In compared the CSQ mean scores with socio-demographic characteristics of nursing students; there were no significant differences between age group, gender, nursing ranking in the occupational choices, and the first application unit of nursing students before the clinical practice (p>0.05). The mean challenge subscale (26.06±6.32) and total scale (53.28±9.73) scores of female before the clinical practice were significantly higher than the average challenge subscale score (21.95±7.33) and total scale score (47.53±9.31) of male after the clinical practice (p<0.05). The average harm/loss and benefitsubscale scores of nursing students who choose unwillingly the nursing department were higher than the average score of students who choose willingly. There were significant group differences between school preference before the clinical practice (p<0.05). But, there were no significantdifferences between school preference after the clinical practice (p>0.05) (Table 5).

Bektas, H., Terkes, N., & Ozer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

Table 6. Ways of Coping Questionnaire (WCQ) Average Scores On Students' Socio-Demographic Characteristics (n=90)

	Before the clinical practice					After the clinical practice				
Variables	**Self-confident approach**	**Helpless approach**	**Submissive approach**	**Optimistic approach**	**Receiving social support**	**Self-confident approach**	**Helpless approach**	**Submissive approach**	**Optimistic approach**	**Receiving social support**
Gender										
Female	18.75±3.83	12.72±4.09	12.79±3.85	14.52±3.15	9.62±2.26	18.90±4.66	14.07±4.66	14.61±4.44	15.08±3.59	9.92±2.70
Male	17.68±5.01	12.21±3.58	12.00±3.51	13.79±3.86	8.58±2.89	19.37±3.71	14.47±4.01	15.53±4.07	14.16±3.06	9.79±3.58
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005
Age										
<19	17.73±0.57	12.90±0.58	12.29±0.59	13.98±0.55	9.51±0.38	18.98±0.71	13.76±0.73	14.42±0.70	15.29±0.59	10.36±0.44
20	19.72±0.78	13.12±0.78	13.24±0.71	15.28±0.62	9.28±0.46	18.72±0.88	14.76±0.85	15.08±0.79	14.56±0.60	9.48±0.68
>21	18.80±0.86	13.15±0.93	12.60±0.82	14.10±0.50	9.30±0.52	19.40±0.85	14.30±0.83	15.30±0.91	14.40±0.61	9.35±0.34
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005
Nursing ranking in the occupational choices										
1-5	18.77±3.89	13.04±4.36	12.89±3.90	14.68±3.08	9.49±2.25	19.13±5.031	14.08±4.78	14.68±4.42	14.72±3.70	9.66±3.16
6-10	18.59±3.00	12.06±3.56	12.41±3.85	14.41±3.57	9.59±2.50	19.71±3.057	14.82±4.18	15.47±4.33	16.12±3.53	10.82±1.97
>10	17.80±5.38	11.95±3.15	12.10±3.49	13.50±3.67	9.00±2.86	18.05±3.845	13.80±4.18	14.55±4.38	14.30±2.67	9.70±2.71
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005
School preference										
Willingly	18.00±4.13	11.93±3.69	12.09±3.70	14.40±3.42	9.37±5.80	18.54±4.062	13.91±4.20	14.72±3.94	13.72±3.24	9.58±2.60
Unwillingly	19.67±3.63	13.62±3.91	13.71±3.70	14.57±3.32	9.19±2.31	20.52±5.921	15.14±5.94	15.67±5.87	16.48±4.03	11.19±3.80
Incidentally	19.00±4.57	14.08±4.88	13.25±4.07	13.83±2.91	9.92±2.84	18.50±2.780	13.58±2.90	13.67±2.96	13.58±2.90	9.08±1.50
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005
The first application unit										
Internal Medicine	18.73±4.24	12.77±4.12	12.67±3.62	14.35±3.55	9.33±2.41	18.85±4.34	13.60±4.38	14.35±4.24	14.73±3.67	9.65±2.26
Surgical	18.29±3.96	12.43±3.84	12.57±3.98	14.38±3.05	9.48±2.47	19.17±4.64	14.79±4.63	15.31±4.48	15.07±3.30	10.17±3.37
	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005	p>0.005

Bektas, H., Terkes, N., & Ozer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

In compared the WCQ mean scores with socio-demographic characteristics of nursing students; there were no significant differences between age group, gender, nursing ranking in the occupational choices, school preference and the first application unit of nursing students before and after the clinical practice (p>0.05) (Table 6).

Table 7. Mutual Correlation between the Pagana Clinical Stress Questionnaire (CSQ) and Ways of Coping Questionnaire (WCQ) Before and After the Clinical Practice

	CSQ		**WCQ**	
	Before	After	Before	After
CSQ	1	1	0.490/0.000*	0.520/0.000*
WCQ	0.490/0.000*	0.520/0.000*	1	1

* Correlation is significant at the 0.05 level

A positive correlation was found between the total score of CSQ and WCQ before (r=0.490, p=0.000) and after (r=0.520, p=0.000) the clinical practice (Table 7).

Discussion

The aim of this study was to assess the sources the clinical stress among nursing students, the coping strategies they used to overcome these stresses, and identify the relationships between the clinical stress and the coping strategies. We first wanted to investigate the level the clinical stress of the Turkish nursing students before and after the clinical practice days and expected that a high level of stress level would be found. It was anticipated that there would be challenges faced by these students, in terms of adaptation to a foreign clinical environment and particularly ill people, academic performance and be afraid from faculty member. However, the finding showed that their clinical stress level was just moderately high.

In the present study, encounter new situation and environment, don't feel adequate, and worry about not making right applications were the most prominent reported stressors among nursing students at both data-collection times. These findings are consistent with previous research studies (Tully, 2004-46; Nolan & Ryan, 2008-40; Chen & Hung, 2014-76). Nursing students must perform procedures that can cause serious harm to their patients, thus enhancing their fear of making mistakes (Seyedfatemi, Tafreshi, & Hagani, 2007-5; Atay, & Yılmaz, 2011-34). In different studies in the literature, communication problems between the nursing student and the health-care team, fear of making mistakes, not communicating well with the patient and working in unfamiliar environments were reported to be the most common conditions causing stress (Sharif & Masoumi, 2005-4; Worrall, 2007-32; Konak et al., 2008-3; Aydin & Argun, 2010-212).

Many research studies have shown that the clinical experience contributes to student stress (Sheu et al., 2002-170; Evans & Kelly, 2004-477; Suresh et al., 2012-775). Moderate levels of stress and anxiety can improve the students' creativity and development (Chan et al., 2009-310; Melincavage, 2011-785). But, the existence of a high level of stress during the training course might have negative effects on the students' clinical learning and success (Sarikaya et al., 2006-1414).

The results of this study showed that the stress faced by nursing students during their initial period the clinical practice, came mainly from lack of professional knowledge and skills as well as the actual experience of caregiving. It was found in this study that the level of stress in nursing students was high before and after the clinical practice. Nigerian nursing students have high levels of stress (Omigbodun et al., 2004-415), a finding supported by this study. High levels of stress among students also have been found in many studies during the clinice practice period (Sharif & Masoumi, 2005; Burnard et al., 2008-144; Chan et al., 2009-310; Atay &Yılmaz, 2011-36).

In our study, there were no significant differences between the overall mean CSQ score, before and after the clinical pratice. Only on the 'harm/loss' subscale of the CSQ, after the clinical pratice were found to have significantly higher scores than before the clinical pratice. Similarly, Sirin

Bektas, H., Terkes, N., & Ozer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

et al. (2003-31) found no difference in anxiety levels of the students before, during, and after the practice.

We found that the most commonly used coping strategies were self confident and optimistic approach in our study. Temel et al. (2007-115) demonstrated that the nursing students mostly adopted self-confident approach among the active patterns. Tully (2004-47) determined that employment of the self-confident approach among the active patterns in coping with stress was related to low stress levels and an indication of adaptation to the situation. We found that the least common coping strategy used by nursing students was receiving social support. In contrast, Mahat (1998-15) found that a majority of students were found to utilize the "receiving social support" category of coping more than others. This may be related to the cultural differences. While talking to a counselor and getting professional counseling are cultural behaviors, many people may refuse professional help, except for severe problems (Seyedfatemi et al., 2007-5).

The relationships between stress and socio- demographic variables such as age and gender before and after the clinical practice were also examined in this study. In this study sample of nursing students, while there were no significant differences between age group, gender, nursing ranking in the occupational choices,and the first application unit of students on the levels of general state stress before the clinical practice, there were significantly group differences on school preference. After the clinical practice, the mean challenge subscale and total scale scores of female were significantly higher than the average challenge subscale score and total scale score of male. Previous studies examining the relationship between gender and anxiety suggest that females experience higher levels of psychological distress than their male counterparts (Dyrbye et al., 2006-358; Chandavarkar et al., 2007-106).

For the present study, the important finding is the correlation between clinical stress and ways of coping. These correlations were significant and positive before ($r=0.490$, $p=0.000$) and after ($r=0.520$, $p=0.000$) the clinical practice.

Results can provide an insight for stakeholders in nursing clinical practice, nurse education and hospital administration in developing nurse education, practice and organisational workforce planning in an effort to prevent, reduce or manage stress. This can lead to greater focus on stress awareness, management and prevention in the clinical environment.

Limitations

The present study has some limitations. First, the study was conducted in one health school in Turkey. Second, our study population was composed of small number of young 'exclusive' participants, that is, currently enrolled nursing students. Thus, conclusions can not be generalized to other populations, even nursing students.

Conclusion

Nursing students experience varying degrees of stress across clinical courses. Students consistently report that their clinical experiences are stressful. The study results revealed that the most reported stressors at the both data-collection times were self confident, and optimistic approach. These findings indicate the need for stress management programs specific to the needs of nursing students. Given the detrimental effects of stress on health and academic performance, college administrators should consider incorporating stress management training into orientation activities for nursing students. The nursing school educators as well as students should be aware of stress management strategies (e.g. using active coping and avoiding self-blame) that may help prevent depression.

According to the results of this study, the following suggestions are made for clinical practice and future studies.

Bektas, H., Terkes, N., & Ozer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

- Lack of professional knowledge and skills along with actual taking care of patients were the two major sources of stress among nursing students during the initial period of the clinical practice. Since students have limited professional knowledge and skills during this period, these stressors are unavoidable. However, if faculty members encourage students to practice their nursing skills in the laboratory, a greater level of proficiency may be achieved prior to their clinical practice. Also, clinical faculty members may provide better guidance to students, thus reducing the stress perceived by students.
- The nursing curriculum should be proactive in equipping student nurses with effective coping skills, which can be called upon in their future nursing careers.
- In an attempt to diminish the stress the theory practice gap causes for student nurses the introduction of a joint appointment role for nurse educators is a tangible proposal.

Decleration of Conflicting Interests

The authors declared no potential conflict of interest with respect to the authorship and/or publication of this article.

Funding

Thisstudy has been received external funding from Akdeniz University Scientific Research Management Unit.

References

Al-Zayyat, A. S., & Al-Gamal, E. (2014). Perceived stress and coping strategies among Jordanian nursing students during clinical practice in psychiatric/mental health courses. *International Journal of Mental Health Nursing*, 23 (4), 326–335.

Atay, S., & Yılmaz, F. (2011).The first stress levels of the students of vocational Higher School of Health [Sağlık Yüksek Okulu öğrencilerinin ilk klinik stress düzeyleri]. *Journal of Anatolia Nursing and Health Sciences [Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi],* 14 (4), 32-37.

Aydin, M. F., & Argun, M. Ş. (2010). The expectations of hospital practices and faced problems of the students in BitlisErenÜniversity, Health School, Department of Nursing.*Acibadem University Journal* of *Health Sciences [Acıbadem Üniversitesi Sağlık Bilimleri Dergisi],* 1 (4), 209-213.

Barimnejad, L., Azarkerdar, A., Hajimiri, P., &Rasouli, F. (2004). The investigation of the point of view of nursing students in term five and afterward about affective factors on the development the clinical education. *Iranian Journal of Medical Education*, 10, 64-65.

Burnard, P., Edwards, D., Bennett, K., Thaibah, H., Tothova, V., Baldacchino, D., . . .Mytevelli, J. (2008). A comparative, longitudinal study of stress in student nurses in five countries: Albania, Brunei, The Czech Republic, Malta and Wales. *Nurse Education Today,* 28, 134-145. doi:10.1016/j.nedt.2007.04.002.

Chan, C. K. L., So, W. K. W., & Fong, D. Y. (2009). Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice.*Journal of Professional Nursing,* 25 (5), 307-313. doi: 10.1016/j.profnurs.2009.01.018.

Chandavarkar, U., Azzam, A., & Mathews, C. A. (2007).Anxiety symptoms and perceived performance in medical students.*Depression and Anxiety,* 24 (2), 103-111. doi: 10.1002/da.20185.

Chen, Y. W., & Hung, C. H. (2014). Predictors of Taiwanese baccalaureate nursing students' physio–psycho–social responses during clinical practicum.*Nurse Education Today,* 34 (1), 73-77. doi: 10.1016/j.nedt.2013.02.021.

Chipas, A. D. Cordrey, D. Floyd, L. Grubbs, S. Miller, & B. Tyre. (2012). Stress: perceptions, manifestations, and coping mechanisms of student registered nurse anesthetists. *American Association of Nurse Anesthetists Journal*, 80 (4), 49-55.

Bektas, H., Terkes, N., & Ozer, Z. (2018). Stress and ways of coping among first year nursing students: A Turkish perspective. *Journal of Human Sciences*, *15*(1), 319-330. doi:10.14687/jhs.v15i1.4626

Christensson, A., Vaez, M., Dickman, P. W., &Runeson, B. (2011). Self-reported depression in first-year nursing students in relation to socio-demographic and educational factors: a nationwide cross-sectional study in Sweden. *Social Psychiatry and Psychiatric Epidemiology,* 46 (4), 299-310.doi: 10.1007/s00127-010-0198-y.

Dyrbye, L. N., Thomas, M. R., & Shanafelt, T. D. (2006). Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students.*Academic Medicine,* 81 (4), 354-373.

Evans, W., & Kelly, B. (2004). Pre-registration diploma student nurse stress and coping measures.*Nurse Education Today,* 24 (6), 473-482. doi:10.1016/j.nedt.2004.05.004.

Hamaideh, S. H., Al-Omari, H., & Al-Modallal, H. (2017). Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia. *Journal of Mental Health*, 26(3), 197-203.

Hamaideh, S., & Ammouri, A. (2011). Comparing Jordanian nurses' job stressors in stressful and non-stressful clinical areas. *Contemp Nurse*, 37, 173–187.

Konak, S. D., Dericiogulları, A., & Kılınc, G. (2008). View of the nurses working at Burdur State Hospital about clinical practices of the student nurses and making cooperation with teaching staffs. *SDU Journal of Medicine,* 15 (1), 1-5.

Labrague, L. J., McEnroe-Petitte, D. M., Gloe, D., Thomas, L., Papathanasiou, I. V., & Tsaras, K. (2017). A literature review on stressand coping strategies in nursing students, *Journal of Mental Health,* 26 (5), 471-480.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer Publishing Company. pp. 117-139.

Liu, M., Gu, K., Wong, T. K., Watson, R., Luo, M. Z. & Chan, M. (2015). Perceived stress among Macao nursing students in the clinical learning environment. *International Journal of Nursing Sciences*, 2, 128–133.

Mahat, G. (1998). Stress and coping: junior baccalaureate nursing students in clinical settings. *Nurse Forum,* 33 (1), 11-19. doi: 10.1111/j.1744-6198.1998.tb00976.x.

Melincavage, S. M. (2011). Student nurses' experiences of anxiety in the clinical setting. *Nurse Education Today,* 31 (8), 785-789.doi: 10.1016/j.nedt.2011.05.007.

Nelwati, D., McKenna, L., Plummer, V. (2013). Indonesian student nurses' perceptions of stress in clinical learning: A phenomenological study. *Journal of Nursing Education and Practice*, 3, 56–65. doi: 10.5430/jnep.v3n5p56.

Nolan, G., & Ryan, D. (2008). Experience of stress in psychiatric nursing students in Ireland.*Nursing Standard,* 22 (43), 35-43.

Oermann, M. H., & Lukomski, A. P. (2001). Experiences of students in pediatric nursing clinical a courses. *Journal of the Society of Pediatric Nurses,* 6 (2), 65-72.

Omigbodun, O. O., Onibokun, A. C., Yusuf, B. O., Odukogbe, A. A., & Omigbodun, A. O. (2004). Stressors and counseling needs of undergraduate nursing students in Ibadan, Nigeria.*Journal of Nursing Education,* 43 (9), 412-415.

Pagana, K. D. (1989). Psychometric evaluation the clinical stress questionnaire (CSQ). *Journal of Nursing Education,* 28 (4), 169-174.

Sahin, N.H., & Durak, A., (1995). Stress-coping patterns scale: Adaptation for university students [Stresle Başa Çıkma Tarzları Ölçeği: Üniversite öğrencileri için uyarlaması]. *Turk Journal of Psychology [Türk Psikoloji Dergisi],* 10, 56-73.

Sarikaya, O., Civaner, M., & Kalaca, S. (2006). The anxieties of medical students related to clinical training. *International Journal the Clinical Practice,* 60 (11), 1414-1418. doi: 10.1111/j.1742-1241.2006.00869.x.

Sendir, M., & Acaroglu, R. (2008). Reliability and validity of Turkish version the clinical Stres Questionnaire.*Nurse Education Today,*28 (6), 737-743. doi: 10.1016/j.nedt.2007.11.008.

Seyedfatemi, N., Tafreshi M., & Hagani, H. (2007). Experienced stressors and coping strategies among Iranian nursing students. BMC Nursing. [Cited 15 Mar 2016] Available from URL: http://bmcnurs.biomedcentral.com/articles/10.1186/1472-6955-6-11. doi: 10.1186/1472-6955-6-11.

Sharif, F., & Masoumi, S. (2005). A qualitative study of nursing student experiences the clinical practice. BMC Nursing. [Cited 01 Mar 2016] Available from URL: http://bmcnurs.biomedcentral.com/articles/10.1186/1472-6955-4-6. doi: 10.1186/1472-6955-4-6.

Sheu, S., Lin, H. S., & Hwang, S. L. (2002). Perceived stress and physio-psycho-social status of nursing students during their initial period the clinical practice: The effect of coping behaviors. International Journal of Nursing Studies 39 (2), 165-175. doi:10.1016/S0020-7489(01)00016-5.

Sirin, A., Kavlak, O., & Ertem, G. (2003). Determination of the state-trait anxiety levels of students who are on labour room in maternity hospital [Doğumhane stajına çıkan öğrencilerin durumluk-sürekli kaygı düzeylerinin belirlenmesi]. *Journal of Republic University Nursing School [Cumhuriyet Üniversitesi Hemşirelik Yüksekokulu Dergisi],* 7, 28-32.

Sun, F. -K., Long, A., Tseng, Y. S., Huang, H. -M., You, J. -H. & Chiang, C. -Y. (2016). Undergraduate student nurses' lived experiences of anxiety during their first clinical practicum: A phenomenological study. Nurse Education Today, 37, 21–26.

Suresh, P., Matthews, A., & Coyne, I. (2012). Stress and stressors in the clinical environment: A comparative study of fourth-year student nurses and newly qualified general nurses in Ireland. *Journal the Clinical Nursing,* 22 (5-6), 770-779. doi: 10.1111/j.1365-2702.2012.04145.x.

Temel, E., Bahar, A., & Cuhadar, D. (2007). Determination of coping attitude with stress and depression level of nursing students [Öğrenci hemşirelerin stresle başetme tarzları ve depresyon düzeylerinin belirlenmesi]. *Journal of Firat Health Service [Fırat Sağlık Hizmetleri Dergisi],* 2 (5), 108-118.

The Council of Higher Education (Yükseköğretim Kurulu Başkanlığı). (2008). Doktorluk, Hemşirelik, Ebelik, Diş Hekimliği, Veterinerlik, Eczacılık Ve Mimarlık Eğitim Programlarının Asgari Eğitim Koşullarının Belirlenmesine Dair Yönetmelik. [Cited 01 Feb 2016] Available from URL: http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.11949&sourceXmlSearch=Doktorluk,%20Hem%C5%9Firelik,%20Ebelik,%20Di%C5%9F%20Hekimli%C4%9Fi,%20Veterinerlik,%20Eczac%C4%B1l%C4%B1k%20Ve%20Mimarl%C4%B1k%20E%C4%9Fitim%20Programlar%C4%B1&MevzuatIliski=0

Tully, A. (2004). Stress, sources of stress and ways of coping among psychiatric nursing students. *Journal of Psychiatric and Mental Health Nursing,* 11 (1), 43-47. doi: 10.1111/j.1365-2850.2004.00682.x.

Watson, R., Deary, I., Thompson, D., & Li, G. (2008). A study of stress and burnout in nursing students in Hong Kong: a questionnaire survey. *International Journal of Nursing Studies,* 45 (10), 1534-1542. doi: 10.1016/j.ijnurstu.2007.11.003.

Worrall, K. (2007). Orientation to student placements: Needs and benefits. *Paediatric Care,* 19 (1), 31-33. http://dx.doi.org/10.7748/paed2007.02.19.1.31.c4443.

Yamashita, K., Saito, M., &Takao, T. (2012).Stress and coping styles in Japanese nursing students.*International Journal of Nursing Practice,* 18 (5), 489-496.doi: 10.1111/j.1440-172X.2012.02056